

# **HIGH DATA RATE COMMUNICATION SYSTEM FOR WIRELESS APPLICATIONS**

## **ABSTRACT OF THE DISCLOSURE**

5           A decoder for a communication system includes an iterative decoding module  
configured to receive soft-input information bits. The iterative decoding module  
iterates on probability estimates of the soft-input information bits to generate hard-  
decision output information. The iterative decoding module includes a plurality of  
arithmetic modules operating to generate and process both backward and forward  
10   metrics substantially simultaneously using modulo arithmetic operations.

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